

Cretaceous amber of Ecuador unveils new insights into South America's Gondwanan forests

Corresponding Author: Professor Xavier DELCLOS

This file contains all editorial decision letters in order by version, followed by all author rebuttals in order by version.

Attachments originally included by the reviewers as part of their assessment can be found at the end of this file.

Version 0:

Decision Letter:

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Dear Dr DELCLOS,

Your manuscript titled "Cretaceous Amber of Ecuador: Unveiling new Insights into South America's Gondwanan Forests" has now been seen by our reviewers, whose comments appear below. In light of their advice we are delighted to say that we are happy, in principle, to publish a suitably revised version in Communications Earth & Environment.

We therefore invite you to revise your paper one last time to address the remaining concerns of our reviewers. At the same time we ask that you edit your manuscript to comply with our format requirements and to maximise the accessibility and therefore the impact of your work.

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We hope to hear from you within two weeks; please let us know if you need more time.

Best regards,

Alireza Bahadori, PhD
Associate Editor
Communications Earth & Environment
Consulting Editor
Communications Sustainability

REVIEWERS' COMMENTS:

Reviewer #1 (Remarks to the Author):

This is a very interesting and important paper on the first Cretaceous amber from South America with insect inclusions and thus deserves to be published.

Although there could be some improvements to the grammar, which I hope the editor will address, my only comments/corrections are-

- 1) Throughout, better to put Formation rather than 'Fm'.
- 2) Lines 189 and 191. 'aleyroid' is incorrect, it should be aleyrodoid if referring to the superfamily, or aleyrodid if referring to the family.
- 3) Line 289. Replace 'an' with 'and'

Reviewer #2 (Remarks to the Author):

This paper presents a valuable study of the first bioinclusions found in Cretaceous amber from the Gondwana region. It discusses the position and properties of amber from Ecuador in detail, as well as the environmental background. It provides the first synthetic study of Cretaceous amber from a new site in the southern hemisphere. It will certainly be cited and will be of interest to scientists in many fields. I believe that the described bioinclusions from the Southern Hemisphere will be the subject of further evolutionary research and analysis. The analyses and comparisons of the amber forest environment are highly relevant and interesting. Produced in collaboration with a large group of renowned Spanish palaeontologists and an international team, the work represents an important contribution to our knowledge of the world's fossil resins. All of this is supported by the necessary illustrations. This important work provides new, very interesting data and information. It should be published.

Some remarks:

Label a,b,c on Fig. 1.

Fig. 3. please align the photos - especially d and e

Line 107: suggest add.... their chemical characteristics

line 145: comma missing before 'and Dolichopodidae (1)'

146-147: suggest rewrite. All these previous examples are holometabolous insects. The remaining three belong to the Hemiptera: 147 Aleyrodidae (1) and Hemiptera indet. (2), which are representative of paraneopteran insects.

line 150 Archiaustroconops AUTHOR

156-157: Microphorites AUTHOR M. extinctus AUTHOR, YEAR; at the end of sentence the reference is missing

159: belongs to the subfamily Eustrophinae of the family Tetratomidae

Suppl

Line 122-129 There are no authors and years in species. References are missing.

Figure S5, S6. supplementary - it is not clear which spectra correspond to which ambers.

Reviewer #3 (Remarks to the Author):

The present research entitled "Cretaceous Amber of Ecuador: Unveiling new Insights into South America's Gondwanan Forests" is a well-written paper reporting the first Cretaceous amber deposit with bioinclusions in South America. The age

and palaeoenvironment of the amber deposit are well-supported by the local flora. This study provides the direct evidence for the palaeoecology of the Cretaceous South America's Gondwanan forests. Some minor suggestions are as follows:

1 Please add the figures of the hemipterans and the spider web, which are missing in the current figure 3 and Supplementary Information.

2 "Amber types and characteristics" in the Supplementary Information is important, and I suggest to move this part including figures to the main text.

3 Line 24, "exceptional" to "rare".

4 Lines 24-26. I think the authors mean the Cretaceous amber. Because some Cenozoic amber with arthropod inclusions have been reported from South Hemisphere. So it can be changed to "Cretaceous amber remains rare in the Southern Hemisphere".

5 Line 124. Changed to "These results suggests that the resin was ..."

6 Line 144. These bioinclusions are commonly deformed. So I think they are not "exceptionally well preserved". I suggest to delete the word "exceptionally".

7 Line 182. "overlap" to "overlapped".

8 Line 186. "as larvae of this order aquatic" to "as larvae of this order are aquatic".

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Response to Reviewers' Comments and Changes Made to the Revised Manuscript

Dear Editor,

Nearly all of the reviewers' comments have been addressed. For the few that were not implemented, we have provided specific explanations detailing the reasons for not making the suggested changes. However, some modifications may be difficult to identify now because the line numbers corresponding to the corrections have changed, due to text being moved from the Supplementary Material to the main text, and the abstract being shortened. All reviewers' corrections were made prior to the inclusion of new text and the reduction of the abstract in the main text.

REVIEWERS' COMMENTS:

Reviewer #1 (Remarks to the Author):

- 1) Throughout, better to put Formation rather than 'Fm'. [Corrected throughout the text.](#)
- 2) Lines 189 and 191. 'aleyroid' is incorrect, it should be aleyrodoid if referring to the superfamily, or aleyrodid if referring to the family. [Changed](#)
- 3) Line 289. Replace 'an' with 'and'. [Done](#)

Reviewer #2 (Remarks to the Author):

Label a,b,c on Fig. 1. [Done](#)

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line 150 Archiaustroconops AUTHOR. [Because we are not bound by the International Code of Zoological Nomenclature, and to ensure a smoother reading experience, we do not include the names of the authors of the genera and/or species anywhere in the text.](#)

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Figure S5, S6. supplementary - it is not clear which spectra correspond to which ambers. Now Supplementary Fig. 4 and 5; we are improved the information in the two FTIR figures of the supplementary Information.

Reviewer #3 (Remarks to the Author):

1 Please add the figures of the hemipterans and the spider web, which are missing in the current figure 3 and Supplementary Information. A new figure has been introduced in the supplementary material (Supplementary Fig. 4) that includes three new specimens, two of which are the specimens requested by the reviewer.

2 "Amber types and characteristics" in the Supplementary Information is important, and I suggest to move this part including figures to the main text. Partially completed. We have passed the corresponding part of the text and one figure, but we have left the geochemistry representation (3 figures) in the supplementary material so as not to overload the main text.

3 Line 24, "exceptional" to "rare". Done

4 Lines 24-26. I think the authors mean the Cretaceous amber. Because some Cenozoic amber with arthropod inclusions have been reported from South Hemisphere. So it can be changed to "Cretaceous amber remains rare in the Southern Hemisphere". Yes, done.

5 Line 124. Changed to "These results suggests that the resin was ..." Done.

6 Line 144. These bioinclusions are commonly deformed. So I think they are not "exceptionally well preserved". I suggest to delete the word "exceptionally". OK, done.

7 Line 182. "overlap" to "overlapped". Done.

8 Line 186. "as larvae of this order aquatic" to "as larvae of this order are aquatic". Done.